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(56) Documents cited

GB 2056555 A

GB 1496206 A

GB 1344334 A

GB 0968347 A

GB 0915295 A

EP 0199942 A1

US 3948349 A

(58) Field of search

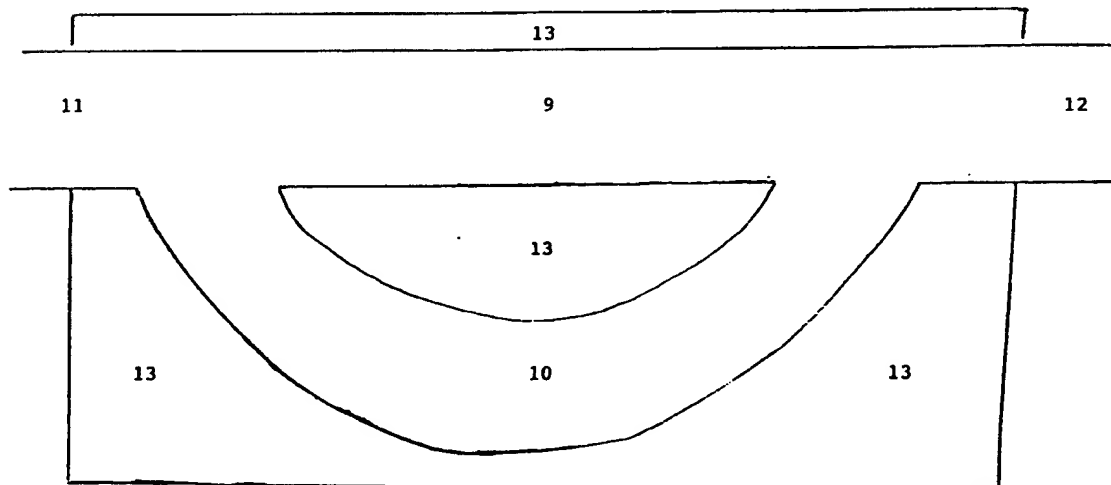
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(54) Exhaust silencing system

(57) The exhaust gases are split into at least two different channels 9 and 10 made of perforated metal tube and surrounded by absorption material. When the gases recombine wave interference occurs so reducing the level of noise output.

FIGURE 1



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FIGURE 1

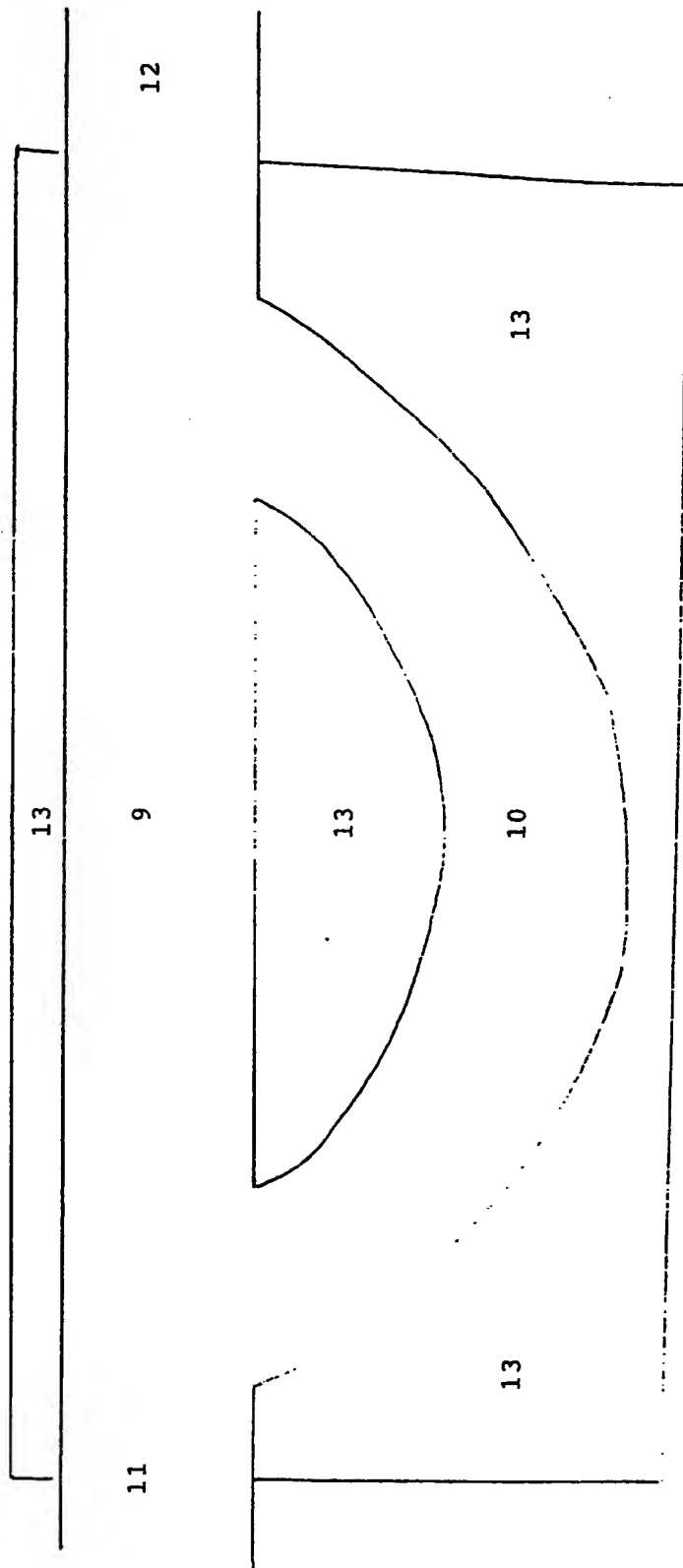


FIGURE 2

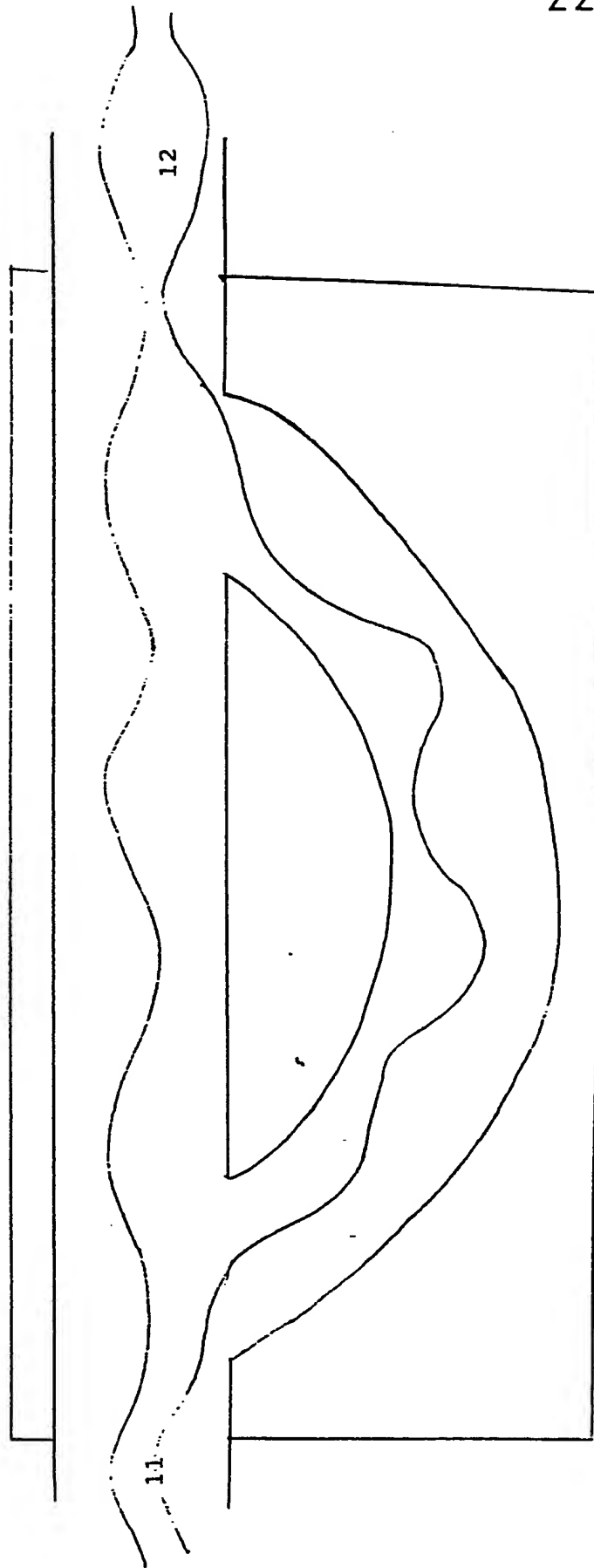
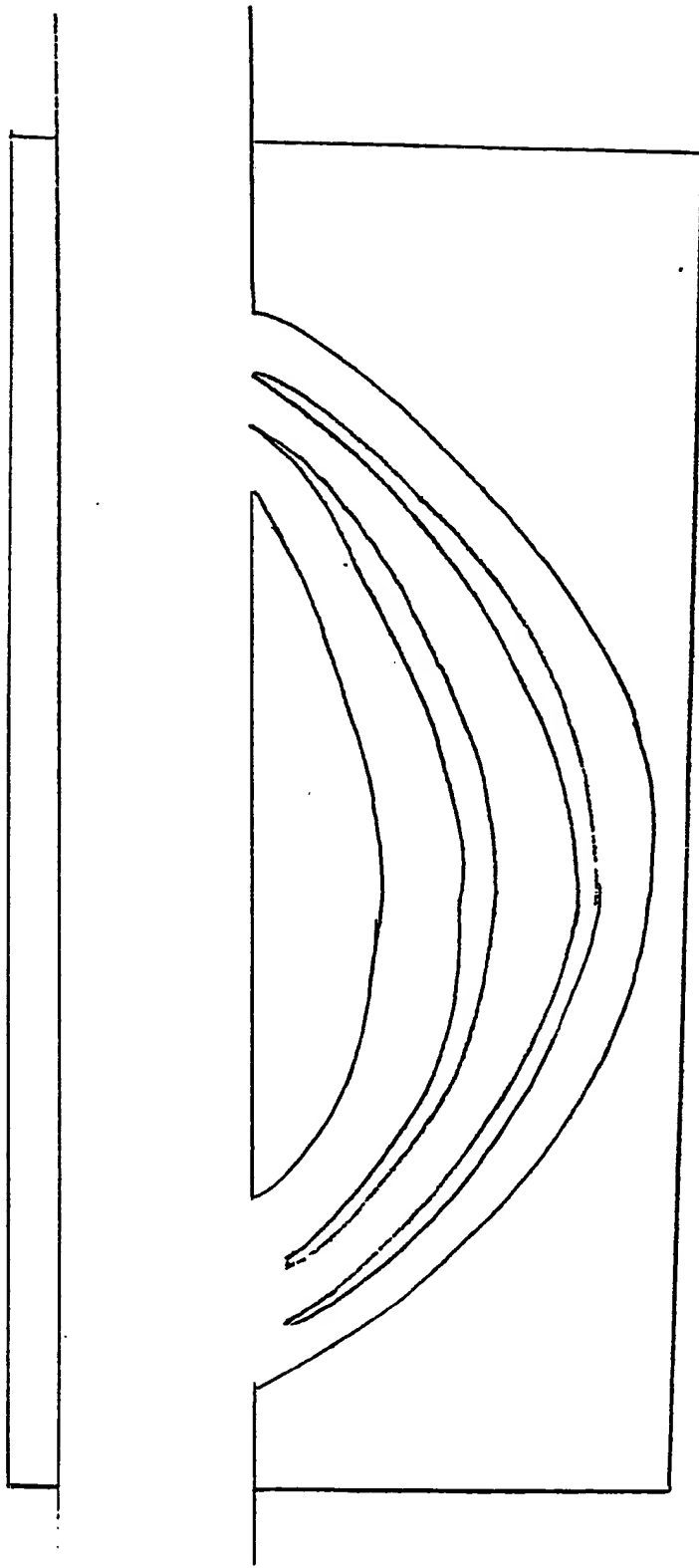


FIGURE 3



-1-

EXHAUST SILENCING SYSTEM

This invention relates to an exhaust silencing system.

Exhaust silencer systems are well known systems attached to the output side of internal combustion engines, to remove the gases in such a way as to reduce the noise incurred to acceptable levels as set by construction and use regulation or ruling bodies of motor sport.

According to the invention, when the gases enter the silencer system they are split into two and fed through two sine channels, one of which is a half-wave longer. When the gases are put back together they are out of synchronisation and the peak and trough cancel each other out, thus reducing the level of noise output.

The invention will now be described by way of example with reference to the accompanying drawings in which:-

Figure 1 shows the construction of the absorption tubes indicating the difference in path lengths;

Figure 2 shows the gases sine waves in the two different tubes;

Figure 3 shows an extension of the invention.

Referring to the drawing Fig. 1., the silencer system comprises a metal casing which houses two perforated tubes, one bent the other straight 10 as shown. The pipes are surrounded by an absorption material 13.

The exhaust gases enter at 11 and are split into the two channels 9 and 10 and then merged at 12 where they meet out of synchronisation Fig. 2. The peak and trough cancel each other out.

Referring to Fig. 2 the gases are not restricted in their flow 14 and 15 making the system self-baffling.

As stated above the gases are not restricted in their flow so the outside casing 16 has a low operating temperature.

CLAIMS

1. A silencer system where the exhaust gases enter and are split into two and fed through two sine channels one of which is a half-wave longer , when they come back together again they are out of synchronisation and the peak and trough cancel each other out thus greatly reducing the noise output.
2. A silencer system as claimed in claim 1 which is self baffling.
3. A silencer system as claimed in claim 2 which has a low operating temperature on the outside metal casing.